The Regulation of Patent Pools

Jonathan D. Putnam
University of Toronto
Centre for Innovation Law and Policy

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Two Themes

- There is insufficient theoretical foundation for the analysis of anticompetitive patent licensing practices under the *IP Guidelines*
  - "One-stage approach to a two-stage problem"
  - Complements vs. substitutes
  - Patent pools illustrate these problems, but the problems are more fundamental
- Empirical tests for harm depend on two-stage analysis
  - These are not analogous to one-stage tests

Current Regulatory Issues

- **Benchmark concepts-- "the competitive level," even "price"--are not defined under either the *Merger Guidelines* or the *IP Guidelines***
- **The harm from misregulation occurs to <u>future</u> inventors and consumers, not present**
  - **This harm dwarfs any harm to the parties**
- ***In the Matter of Summit and VISX* shows the difficulty of applying principles consistently**

Two-Stage Analysis

- Incentives, not actions

  Expectations, not outcomes

  Optimal paths, not optimal points

  Rates of return on investment, not markups of price over cost

- Then, how to measure with available data?

IP Guidelines: §2 principles

The Agencies …

1. regard intellectual property as being essentially comparable to any other form of property

2. do not presume that intellectual property creates market power in the antitrust context

3. recognize that … licensing … combine[s] complementary factors of production and is generally pro-competitive

Principle 1:
IP Comparable To Other Property

- **"IP has important characteristics, such as ease of misappropriation, that distinguish it from many other forms of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles." (§2.1)**

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Intellectual Property Is Not Like Real Property

- There is no affirmative right to use intellectual property--only a negative right to exclude others from using
  - Necessarily implies bargaining with one's neighbors/competitors
- Property rights are enforceable only if investment is "successful"
  - Scope of rights uncertain at time of investment
  - Sample of observed investments is biased

Principle 2:
IP Not Presumed to Have Market Power

- **"Although the intellectual property right confers the power to exclude with respect to the specific product, process or work in question, there will often be sufficient actual or potential close substitutes for such product, process or work to prevent the exercise of market power." (§2.2)**

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(When) Does IP Have Market Power?

- Presumption of no market power among multiple IP rights rests on presumption that they are substitutes

(When) Does IP Have Market Power?

- "Market power is the ability to maintain prices above, or output below, competitive levels for a significant period of time." (§2.2)
- Is "the market" for the IP input or the product?
- What's the competitive level?
  - Hint: it isn't P = MC, since MC of a license is 0
  - Need a theory of the IP and/or product market price level necessary to induce ex ante investment

A Dynamic Story

- Able and Baker sell light bulbs at 0 economic profit. Each has the opportunity to invent a better light bulb as follows: invest $100 in research that pays $250 profit to the winner and $0 to the loser, each with probability 1/2

	Year 1	Year 2
Win	-100	250
Lose	-100	0

Is There Market Power?

- Suppose Able wins: If the cost of Able's investment capital is 25%, then Able merely broke even
  - Ex ante: .5 * 0 + .5 * 250 = 125 ROI = (125-100) / 100 or 25%
  - Ex post: (250 – 100) / 100 = 150%

- Any "remedy" that reduces Able's profit after the fact (e.g., divestiture, compulsory licensing) would render the investment unprofitable relative to similar investments
  - If proposed remedy would have caused the inventor not to invest ex ante, then it is not time-consistent

Benchmarks

- There is no operating definition of “the competitive [price] level” in the context of IP
- There is no operating definition of “price”
  - Is this the quality-adjusted price?
- Without a definition of the competitive level and price, there is no measure of “market power”

Principle 3: Licensing Generally Pro-Competitive

- "Sometimes the use of one item of intellectual property requires access to another. An item of intellectual property 'blocks' another when the second cannot be practiced without the first…. Licensing may promote the coordinated development of technologies that are in a blocking relationship." (§2.3)

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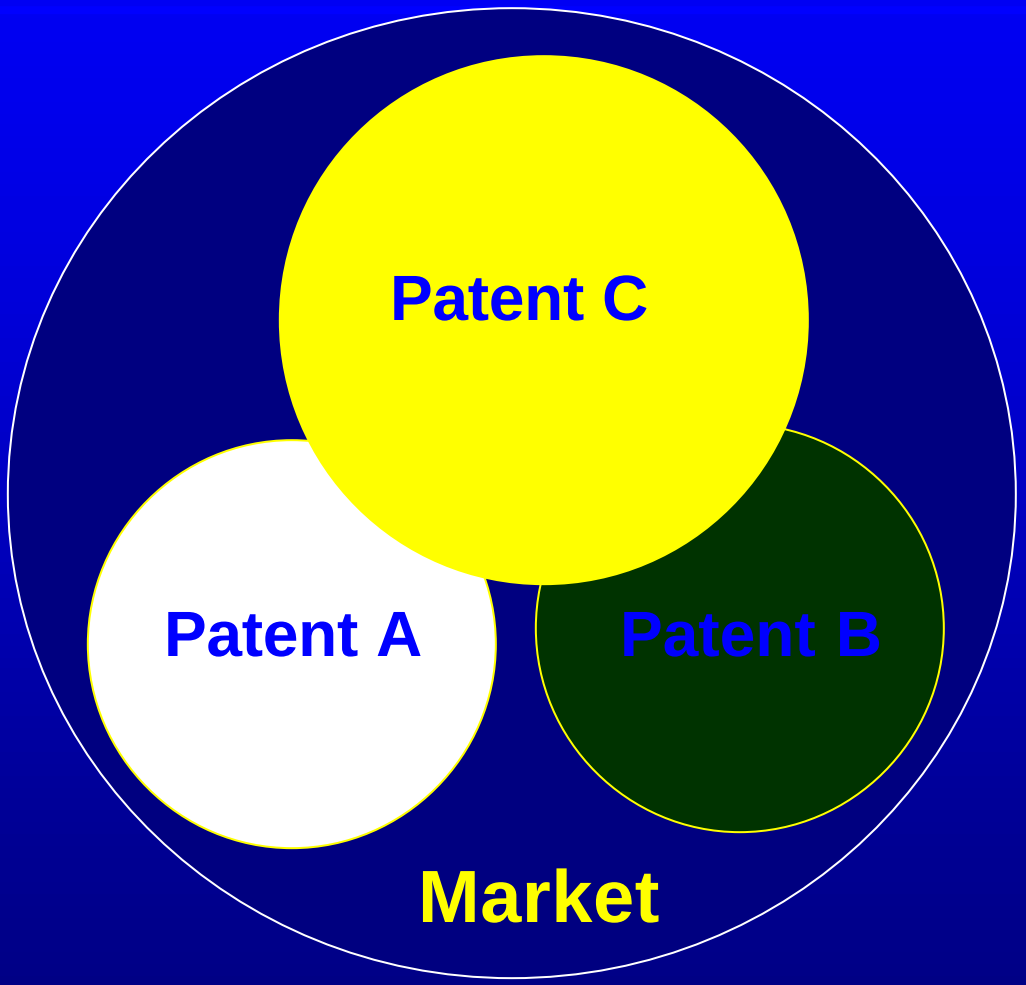
(When) Is Licensing Pro-Competitive?

- **Presumption of pro-competitive licensing of multiple IP rights rests on presumption that they are complements**

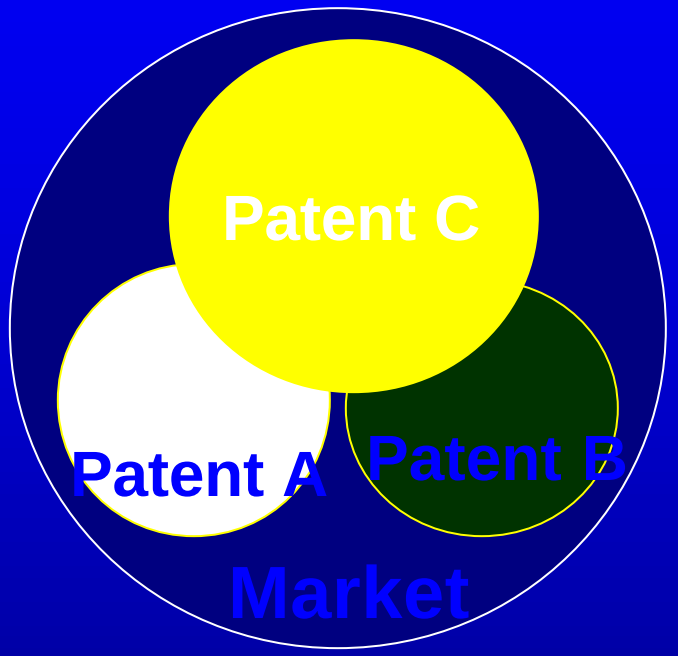
Example:
Three Cross-Licensed Patents



Three Cross-Licensed Patents

Suppose:

- **A and B are substitutes**
- **A and C are complements**
- **B and C are complements**
- **Firm 1 owns A and B**
- **Firm 2 owns C**



Conjecture:

- **There is no license between 1 and 2 that is both efficient and not anti-competitive under the *IP Guidelines***

VISX: Background

- VISX and Summit formed patent pool in 1992, 3 years prior to FDA approval
- All patents in portfolios merged into the pool
- Pool collected a royalty from each partner for each procedure performed on its laser
- Pool analyzed similarly to a merger of IP rights

VISX: Complaint

- Complaint Counsel alleged that the patent pool:
  - restrained trade
  - raised, stabilized and maintained price
  - raised the cost of, deterred and prevented entry
  - deprived consumers of the benefits of competition
- Relative to what?
- Isn't this what patents do?

VISX: Complaint

"… in the absence of [the pool], VISX and Summit … would have competed with one another [in the goods market] … and would have engaged in competition with each other in connection with the licensing of technology …"

- I.e., pooled patents were <u>substitutes</u>

VISX: Response to Pool Allegations

- Complements: Pool was necessary because of mutual blocking patents
- Efficiency: Pool resolved protracted litigation
- Insurance: Pool ensured that each party earned returns on its IP, even if FDA failed to approve its laser system

VISX: Relief Sought Against Pool

- Dissolve the patent pool
  - Each party controls its own patents
  - Royalties set independently
  - Royalty-free cross-license
- Result (after consent decree)
  - VISX's royalty unchanged
  - VISX sues Nidek (3rd entrant)
  - Summit sues Nidek

VISX: Count III

- VISX had market power in a relevant market, and VISX fraudulently obtained a patent in that market
- Relevant markets?
  - VISX's patent, to which all laser firms needed a license
  - Machines
  - Procedures
- CC: The "ability to exclude from a relevant market" was sufficient to prove market power
  - If the patent is a relevant market, and all patents exclude, what about the presumption of no market power?

VISX: Count III Response

- Complaint Counsel had no theory of the competitive level, and no evidence of "prices profitably maintained" above it
- VISX's return on investment was at or below market rates
- Royalty rate (as % of procedure price) "normal"
- No quality-adjusted prices for vision correction

VISX: Count III Response

- **Problem: if all other firms (including Summit) need a license, then the VISX patent is a blocking patent**
  - **i.e., it is a <u>complement</u>**
- **But Complaint Counsel had already pled that VISX's patents did not block Summit's patents in its allegations regarding the patent pool**
  - **i.e., they were <u>substitutes</u>**

Should IP Be Completely Unregulated?

- Principle 1: IP is a private means to a public end ("progress")--not an absolute right

- Principle 2: government antitrust enforcement exists to compensate for
  - (a) externalities of private behavior
  - (b) insufficient private incentives to police behavior

- Principle 3: "free entry" in R&D will (in expectation) erode "excess" returns to R&D

A Normative Proposal: ARNII

- "Anticipated to be Reasonably Necessary to Induce Investment"

- At the time of investment, was the conduct under review anticipated to be reasonably necessary to induce the investment?